

**Testimony on Lead in D.C. Water Samples before the Fisheries, Wildlife,
and Water Subcommittee, Environment and Public Works Committee,
United States Senate**

Testimony of
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Before the
Fisheries, Wildlife and Water Subcommittee
Environment and Public Works Committee
United States Senate
April 7, 2004

Good Morning, Chairman Crapo and Members of the Committee. I am Tom Jacobus, the general manager of Washington Aqueduct. Thank you for the opportunity to be here today.

Washington Aqueduct, which is a part of the Baltimore District of the US Army Corps of Engineers, is a public water utility. We are regulated by the United States Environmental Protection Agency's Region 3 in Philadelphia.

Washington Aqueduct provides potable water not just to the District of Columbia Water and Sewer Authority, but also to Arlington County, Virginia and the City of Falls Church in Virginia as well. All funds for the operations and capital improvements at Washington Aqueduct come from its customers.

The provisions of the Safe Drinking Water Act and its associated regulations are the basis for all operations concerning the production, storage, and transmission of the drinking water produced and sold by Washington Aqueduct to its wholesale customers.

The Potomac River is the source of all water treated by Washington Aqueduct at its Dalecarlia and McMillan treatment plants. The treatment consists of chemically induced sedimentation using aluminum sulfate as the coagulant; filtration in dual media sand and anthracite coal filters; and disinfection using chlorine as the primary disinfectant and chloramines as a secondary disinfectant.

The primary objective of the treatment process is to produce and deliver water to the tap that is free of contaminants and pleasant to drink.

Three processes are simultaneously occurring to achieve that objective. First, organic and inorganic contaminants are removed during treatment. Then the water is disinfected so microorganisms that may have been in the raw water are killed. A disinfectant is carried along in the water (chloramine in this case) so that if the water encounters any bacteria in the distribution system or the building

plumbing, the bacteria will be killed. Finally, the drinking water chemistry is adjusted as it leaves the treatment plants to make it less corrosive to the metals it will encounter in the distribution system and building plumbing.

The Washington Aqueduct's corrosion control has been accomplished by the use of lime to adjust the pH of the water. Tests done in conjunction with the promulgation of the Lead and Copper Rule and reported to EPA in 1994 demonstrated that pH control would be sufficient to achieve Optimal Corrosion Control Treatment for Washington Aqueduct's customers. In the years since it was first proposed, there has been a continuing involvement with EPA to refine the Washington Aqueduct's Optimal Corrosion Control Treatment and report on our ability to meet the pH targets.

However, the District of Columbia Water And Sewer Authority's sampling in accordance with the Lead and Copper Rule in the District of Columbia in 2001 and 2002 and the most recent intensive sampling in 2003 of water that has resided in lead service lines indicate that Washington Aqueduct must take immediate steps to adjust its optimal corrosion control treatment so that different results are achieved in the District of Columbia water distribution system.

To address this issue EPA Region 3, the District of Columbia Water and Sewer Authority and Washington Aqueduct's other wholesale customers in Virginia, the District of Columbia Department of Health, and Washington Aqueduct have formed a Technical Expert Working Group and developed an action plan to address the lead issue. I have attached a copy of the action plan dated March 10, 2004, as an enclosure to this testimony. A peer review panel appointed by US EPA is reviewing this plan and their recommendations will be incorporated in a subsequent update.

In addition, teams have been formed to address production operations, distribution system operations, and risk communication to the public. Representatives of different agencies lead each of these teams. EPA leads the risk communications team; the District of Columbia Water and Sewer Authority leads the distribution system operations team; and Washington Aqueduct leads the production operations team. Representatives of all of the agencies participate on all of the teams. These teams will make a recommendation to be adopted by the technical expert working group that will result in a treatment change. While the exact type and dosage will be determined in the next couple of weeks as a result of the ongoing scientific analysis, it appears that the use of a phosphate-based corrosion inhibitor will be adopted.

Current plans are to begin a partial system application of a revised optimal corrosion control treatment this June followed by a full system application by September. There is optimism that this change will be effective in reducing the lead leaching, but it will take several months to measure the effects. Laboratory studies will be ongoing for many months in parallel with the revised treatment

that may be used to further refine the change in treatment.

I would like to address the role of the Washington Aqueduct Wholesale Customer Board as it pertains to water treatment decisions. The Wholesale Customer Board governs the Washington Aqueduct's financial and strategic planning. The Board is comprised of the general manager of the District of Columbia Water and Sewer Authority, the Arlington County manager and Falls Church city manager. As part of the Board's oversight, there are technical committees that meet to evaluate engineering and financial operations throughout the year.

The board and the committees have worked very effectively to address difficult issues such as a new solids management strategy to meet a new discharge permit and to develop a disinfectant strategy to meet changes to the Disinfection Byproducts Rule. Based on what we have learned in the last eight weeks, we will add corrosion control management as a permanent agenda item, just like we do now with filtered water turbidity, Total Coliform Rule compliance and Disinfection Byproduct Rule compliance. By doing this we will have a procedure in place for the Washington Aqueduct customers to share lead and copper data.

As the general manager of Washington Aqueduct, I intend to take two other actions. First I will make an adjustment to the structure of the Washington Aqueduct organization to integrate an existing water quality office and the capability of our plant operations branch, including our water quality laboratory. Second, I will ask our customers to participate in more frequent and more structured meetings that will improve an ongoing information loop involving them and our water quality office.

In the other two important treatment areas I mentioned earlier (i.e., disinfection and contaminant removal) we have worked very effectively with our customers to know at all times what the conditions are at the treatment plants and in their distribution systems and to implement systems responses on their behalf. The experience of the last several weeks concerning the application of the lead and copper rule indicates we need to give the third element (i.e., corrosion control) the same visibility.

I am confident Washington Aqueduct working with its customers and EPA can accomplish that.

Thank you again for the opportunity to be here today. I will be happy answer your questions.